

**WHAT IS CLAIMED IS:**

1. A paging method which dynamically changes according to network conditions, comprising:
  - 5       a first step of setting an initial paging value in a base transceiver subsystem (BTS) for paging a mobile communication terminal within the BTS for a first period and checking a response to the paging;
  - a second step of performing an operation according to the paging of the mobile communication terminal if it is confirmed that the response has been received through the checking at the first step, while replacing the first period with a second period obtained
    - 10       by dividing the first period by a predetermined value if it is confirmed that no response has been received through the checking at the first step;
    - a third step of returning to the first step by replacing the first period with a minimum period preset by the initial value if the first period replaced at the second step is
      - 15       smaller than the minimum period; and
      - a fourth step of returning to the first step by replacing the first period with the first period replaced at the second step if the first period replaced at the second step is larger than the minimum period.
2. The method of claim 2, further comprising a fifth step performing an error process by the BTS with respect to the mobile communication terminal if no response has been received from the mobile communication terminal although a predetermined time elapses from an initial non-response time.
3. A paging method which dynamically changes according to network conditions, comprising:
  - 25       a first step of setting an initial paging value in a mobile communication terminal for checking whether a paging channel is received by performing a search for the paging channel for a first period of a base transceiver subsystem (BTS) to which the mobile
    - 30       communication terminal belongs;

a second step of checking whether the paging is for the mobile communication terminal by analyzing information of the received paging channel if it is confirmed that the paging channel has been received through the checking at the first step;

5 a third step of returning to the first step by replacing the first period with a second period obtained by dividing the first period by a predetermined value if it is confirmed that the paging channel has been received through the checking at the first step; and

10 a fourth step of performing an operation according to the paging if it is confirmed that the paging is meant for the mobile communication terminal through the checking at the second step, while returning to the first step by replacing the first period with a third period obtained by multiplying the first period by a predetermined value if it is confirmed that the paging is not meant for the mobile communication terminal through the checking.

15 4. The method of claim 3, wherein the third step comprises:

a fifth step of replacing the first period with a second period obtained by multiplying the first period by a first coefficient if it is confirmed that no response has been received through the checking at the first step;

20 a sixth step of returning to the first step by replacing the first period with a preset minimum period if the first period replaced at the fifth step is smaller than the minimum period; and

a seventh step of returning to the first step by replacing the first period with the first period replaced at the fifth step if the first period replaced at the fifth step is larger than the minimum period.

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5. The method of claim 4, wherein the fourth step comprises:

an eighth step of performing an operation according to the paging if it is confirmed that the paging is meant for the mobile communication terminal through the checking at the second step;

30 a ninth step of replacing the first period with the third period obtained by multiplying the first period at the first step by a second coefficient if it is confirmed that

the paging is not meant for the mobile communication terminal through the checking at the second step;

5 a tenth step of returning to the first step by replacing the first period with a preset maximum period if the first period replaced at the ninth step is larger than the maximum period; and

an eleventh step of returning to the first step by replacing the first period with the first period replaced at the ninth step if the first period replaced at the ninth step is smaller than the maximum period.

10 6. The method of claim 5, wherein the first and second coefficients are reciprocal to each other.

7. A recording medium readable by a computer having a program for realizing:  
a first function of a base transceiver subsystem (BTS) provided with a processor  
15 and having a set initial paging value paging a mobile communication terminal within the BTS for a first period and checking a response to the paging;

a second function of performing an operation according to the paging of the mobile communication terminal if it is confirmed that the response has been received through the checking by the first function, while replacing the first period with a second  
20 period obtained by dividing the first period by a predetermined value if it is confirmed that no response has been received through the checking by the first function;

a third function of performing the first function by replacing the first period with a minimum period preset by the initial value if the first period replaced by the second function is smaller than the minimum period; and

25 a fourth function of performing the first function by replacing the first period with the first period replaced by the second function if the first period replaced by the second function is larger than the minimum period.

8. A recording medium readable by a computer having a program for realizing:  
30 a first function of a mobile communication terminal provided with a processor and having a set initial paging value checking whether a paging channel is received by

performing a search for the paging channel of a first period of a base transceiver subsystem (BTS) to which the mobile communication terminal belongs;

5 a second function of checking whether the paging is for the mobile communication terminal by analyzing information of the received paging channel if it is confirmed that the paging channel has been received through the checking by the first function;

10 a third function of performing the first function by replacing the first period with a second period obtained by dividing the first period by a predetermined value if it is confirmed that the paging channel has been received through the checking by the first function; and

15 a fourth function of performing an operation according to the paging if it is confirmed that the paging is meant for the mobile communication terminal through the checking by the second function, while performing the first function by replacing the first period with a third period obtained by multiplying the first period by a predetermined value if it is confirmed that the paging is not meant for the mobile communication terminal through the checking.

9. A paging method which dynamically changes according to network conditions, comprising:

20 a first step of performing a paging with respect to a mobile communication terminal in a base transceiver subsystem for a specified first period and checking a response from the mobile communication terminal;

25 a second step of comparing a second period obtained by dividing the first period by a specified integer value with a specified minimum period set as the smallest period if no response for the paging has been received from the mobile communication terminal;

a third step of returning to the first step by replacing the first period with the minimum period if the second period is smaller than the minimum period; and

a fourth step of returning to the first step by replacing the first period with the second period if the second period is larger than the minimum period.

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10. A paging method which dynamically changes according to network conditions, comprising:

5 a first step of a mobile communication terminal performing a search for a paging channel of a base transceiver subsystem to which the mobile communication terminal belongs for a specified first period;

a second step of comparing a second period obtained by dividing the first period by a specified integer value with a specified minimum period set as the smallest period if no response for the paging has been received for the first period;

10 a third step of returning to the first step by replacing the first period with the minimum period if the second period is smaller than the minimum period; and

a fourth step of returning to the first step by replacing the first period with the second period if the second period is larger than the minimum period.

11. The method of claim 10, further comprising:

15 a fifth step of performing a paging operation if the mobile communication terminal itself is paged for the first period at the second step;

a sixth step of comparing a third period obtained by multiplying the first period by a specified integer value with a specified maximum period set as the largest period if the mobile communication terminal itself has not been paged at the second step;

20 a seventh step of returning to the first step by replacing the first period with the maximum period if the third period is larger than the maximum period; and

an eighth step of returning to the first step by replacing the first period with the third period if the third period is smaller than the maximum period.

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